

U.S.S.N. 10/695,058

-2-

GKNG 1182 PUS

IN THE DRAWINGS:

Please substitute the seven (7) pages of drawings submitted herewith containing Figures 2A, 2B, 3A, 3B, 4A, 4B, 5A, 5B, 6A, 6B, 7A, 7B, 8A and 8B in place of the originally-filed drawing sheets containing the same Figures.

Please also add one (1) sheet of drawings submitted herewith containing new Figure 2C.

U.S.S.N. 10/695,058

-10-

GKNG 1182 PUS

REMARKS

Claims 1-17 are pending in the application. Claims 1, 2, 6, 13, 15 and 16 stand rejected. The remaining claims have been withdrawn from further consideration in response to a prior Restriction Requirement.

The Office Action identifies several objections to the Information Disclosure Statement submitted October 23, 2003, the drawings, and the specification. Claims 2, 6, and 13 also stand rejected under 35 U.S.C. §112, second paragraph, for indefiniteness. Claim 1 also stands rejected under 35 U.S.C. §103 as being unpatentable over Welschof, U.S. Patent No. 6,390,928 in view of Song, U.S. Patent No. 6,468,164. Claims 2, 6 and 13 are also rejected under 35 U.S.C. §103 over Welschof in view of Song in further view of Ingalsbe, U.S. Patent No. 5,292,285. Finally, claims 15 and 16 stand rejected under 35 U.S.C. §103 as being unpatentable over Welschof in view of Song in further view of McLean, U.S. Patent No. 4,791,269.

The Examiner's comments have been carefully considered by Applicants and the Applicants respectfully submit that the case, as presently amended, is in a condition for allowance. The foregoing amendments address each of the specification and drawing objections as well as the indefiniteness rejection. The claims have also been amended to remove reference numerals and to clarify the scope of the invention. The claim amendments were not made for any reasons related to patentability. The following remarks address each of the objections and rejections set forth in the Office Action.

Information Disclosure Statement

The Office Action indicates that the information disclosure statement filed October 23, 2003 fails to comply with 37 CFR 1.98(a)(2) and 37 CFR 1.98(a)(3). Accordingly, Applicants submit herewith a new information disclosure statement together with this response thereby obviating the objections. Specifically, Applicants have supplied another copy of GB 2,319,584 which was indicated as not being received by the Patent Office. Applicants' file record indicates that GB 2 319 584 was supplied with the IDS Form on October 23, 2003.

Applicants identify U.S. Patent No. 5,647,800 to replace cumulative material of the reference DE 4228230 thereby obviating the rejection under 37 CFR 1.98(a)(3). U.S. Patent No. 5,647,800 issued from continuation application 465,611 filed on June 5,

U.S.S.N. 10/695,058

-11-

GKNG 1182 PUS

1995 claiming priority from application 750,404 filed on Aug 27, 1991 which is the same application from whence the DE 4228230 claims priority. Hence, the DE 4228230 is only cumulative of U.S. 5,647,800 and need not be considered in light of supplied U.S. 5,647,800. Applicants assert that they became aware of U.S. Patent No. 5,647,800 on February 3, 2006. The appropriate fee accompanies the Supplemental Information Disclosure Statement.

Drawing Objections

Applicants submit herewith seven (7) pages of drawings containing Figures 2A, 2B, 3A, 3B, 4A, 4B, 5A, 5B, 6A, 6B, 7A, 7B, 8A, and 8B in place of the originally filed drawing sheets containing the same figures. As well, one (1) new sheet of drawings is submitted herewith containing new Figure 2C. The replacement sheets use different reference numerals to identify parts or features which are modified in the various embodiments. In this case, a modified version of a component has been indexed by 100, and a further modified version of the same component is indexed by 200. No new matter has been added. Accordingly, the drawing objections set forth in paragraph 4(a) of the Office Action have all been overcome.

With respect to the drawing objections set forth in paragraph 4(b), Figures 2A and 2B have been amended to indicate the claimed second constant velocity joint 5. As is well understood in the art, the second constant velocity joint 5 need not be shown in detail as it can comprise any number of known constant velocity joint configurations depending upon the particular application under consideration for the inventive driveshaft assembly. Of course, it will also be readily understood by a person of skill in the art that all of the other embodiments in the remaining figures are similarly configured. The specification has been amended at paragraph [0015.1] to reflect what is shown in Figure 2.

Similarly, new Figure 2C schematically illustrates the inner and outer joint part ball track relationships with respect to the joint axis A. Thus, the drawings show the first angles of intersection and second angles of intersection as recited in claim 1. This relationship is also described with respect to Figure 8 in the specification. New paragraphs [0010.1] and [0015.2] describe, in language similar to that used to describe the arrangement of Figure 8, the ball track relationship as shown in Figure 2C.

U.S.S.N. 10/695,058

-12-

GKNG 1182 PUS

Accordingly, all of the information presented in the revised drawing sheets as well as the new drawing sheet Figure 2C and the specification amendments related thereto, are supported in the specification and claims as originally filed. No new matter has been added.

With respect to the drawing objection regarding the outer joint part being formed with an inner cylindrical guiding face 25, Applicants submit that Figure 2B and the specification support this claimed feature. Two guiding faces 25, 26 are identified on the outer joint part 12. As described in the specification at paragraphs [0014] and [0015], the first guiding face is an inner cylindrical guiding face 25, and the second guiding face is an annular stop face 26 against which the cage is supported in a first axial direction R_1 . Figure 2B clearly shows that the outer joint part includes a guiding face 25 which is shown as cylindrical and which abuts another guiding face 26 which is not. Accordingly, the drawing objection set forth in paragraph 4(b) should be withdrawn.

Specification Objections

Paragraph 6 of the Office Action objects to the title of the invention. The title has been amended to overcome the objection.

With regard to the antecedent basis objections set forth in paragraph 7 of the Office Action, the specification has been amended at paragraph [0013] to include the language of claim 1, line 14 wherein "balls which are held in groups in pairs of grooves" is identified. Further, paragraph [0015] has been amended to include the features of claim 16 noting that the journal 44 can be fixed to the inner joint part 117 by, for example, friction welding (such as shown in Figure 4). Accordingly, the specification objections set forth in paragraph 7 of the Office Action should be withdrawn.

Claim Rejections Under 35 U.S.C. §112

The indefiniteness rejection regarding claims 2, 6 and 13 reciting "the ball cage" has been addressed by the foregoing amendments. Again, these amendments were made for purposes of clarity. Also, Applicants request that the rejection of claim 6 be withdrawn in view of the foregoing remarks regarding the inner cylindrical guiding face 25 of the outer joint part 12. This feature is described in the specification at paragraphs [0014] and [0015] and shown in the drawings exactly as described and claimed. Claim

U.S.S.N. 10/695,058

-13-

GKNG 1182 PUS

6 is not indefinite, and the rejection under 35 U.S.C. §112, second paragraph, should be withdrawn.

Claim Rejections Under 35 U.S.C. §103

Applicants traverse the rejections under 35 U.S.C. §103 and submit that a *prima facie* case of obviousness has not been established because the combination of references is improper in view of the lack of motivation or suggestion to combine the references.

As an initial matter, Applicants have clarified claim 1 to note that either the first ball cage or the outer joint part include an inner cylindrical guiding face. Because the joint also includes stop faces however, the axial plunging ability of the cage relative to the inner joint part and outer joint part is fixed. This provides several advantages in that the joint can be very lightweight and have a smaller diameter relative to its torque transmitting capacity. The inventive joint is also cost-effective to produce in that cylindrical surfaces are easier to manufacture than corresponding curved surfaces. The inventive assembly thus comprises two fixed joints having some features more commonly associated with plunging joints, and a longitudinal plunging unit integrated into the intermediate shaft. In contrast, the prior art relied upon in the Office Action concerns conventional fixed joints arranged at ends of a longitudinal plunging unit, or a conventional plunging joint. The conventional fixed joints lack the size and manufacturing advantages of the inventive joint. Further, a plunging joint would not be combined with a plunging shaft because such an arrangement would be redundant and needlessly complex.

For example, the Welshof reference discloses a driveshaft having two constant velocity joints which are fixed joints, and an intermediate shaft having a longitudinal plunging unit. The fixed joints of the Welshof reference are Rzeppa-type fixed joints with bell-shaped outer joint members. The cage elements of Welshof are guided between the outer joint member and the inner joint member on outer spherical and inner spherical faces, respectively. Such joints are more bulky and complex than the claimed inventive joint. Similarly, the Song reference discloses a Rzeppa-type joint which is equally as bulky and complex as the joints of Welshof. The joints of Song comprise a bell-shaped outer joint member and a cage member having inner and outer spherical

U.S.S.N. 10/695,058

-14-

GKNG 1182 PUS

surfaces directly guided between the outer joint member and the inner joint member. The joint of Song is additionally complicated by grooves which are curved in longitudinal section as well as inclined with respect to the longitudinal axis of the joint. Such an arrangement further increases the manufacturing costs.

Thus, the combination of Welschof and Song fail to disclose or suggest at least the Applicants' claimed feature wherein at least one of the first ball cage or the outer joint part include an inner cylindrical guiding face. *See In Re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Accordingly, the rejection of claim 1 under 35 U.S.C. §103 in view of Welschof and Song, should be withdrawn.

For similar reasons, the rejection of claims 2, 6, and 13 under 35 U.S.C. §103 in view of Welschof, Song and Ingalsbe should also be withdrawn. The Ingalsbe reference is a conventional VL plunging joint. Applicants submit that it would not have been obvious to a person of skill in the art to include a plunging joint in a driveshaft having a plunging unit. Further, no reason has been shown as to why one of skill in the art would modify the combined device of Welschof and Song in view of Ingalsbe. Indeed, the Ingalsbe reference is directed toward completely different issues than those addressed by the present invention. Applicants therefore submit that without using the claimed invention as a template for modifying the prior art, the Ingalsbe reference cannot support the obviousness rejections. *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577 (Fed. Cir. 1984) ("It is impermissible to use the patent itself as the source of suggestion."); *Ex Parte Levengood*, 28 USPQ2d 1300-1301, 1302 (BPAI 1993) ("That which is within the capabilities of one skilled in the art is not synonymous with obviousness.").

Further, with respect to claim 13, the claimed conical end regions provide stop faces to simplify the manufacturing process of the inner joint part. The prior art references do not include or suggest such features because they rely upon the outer surface of the inner joint part to act as a stop and guiding face. More than a mere change in shape of the outer face of the inner joint part of the prior art devices would be required for them to remain functional. For this additional reason, the rejection under 35 U.S.C. §103 with respect to claim 13 should be withdrawn.

U.S.S.N. 10/695,058

-15-

GKNG 1182 PUS

With regard to claims 15 and 16, these claims are non-obvious for at least the same reasons set forth with respect to claim 1. That is, the combination of Welschof and Song fail to disclose or suggest each and every feature of Applicants' claimed invention, and the modification of Welschof and Song in view of Ingalsbe would not have occurred to one of ordinary skill in the art at the time that the invention was made.

CONCLUSION

Having overcome all of the objections and rejections set forth in the Office Action, the Applicants submit that the application is in a condition for allowance. Further, because independent claim is in a condition for allowance, the previously withdrawn dependent claims should also be rejoined and allowed for at least these same reasons. Claim 1 was noted as being generic, and remains generic after the amendments. However, the Applicants have amended several of the withdrawn claims to correct similar indefiniteness issues raised in the present Office Action. Accordingly, a Notice of Allowance indicating the allowability of claims 1-17 should be issued. A Petition for Extension of Time (3 months) accompanies this paper. The Examiner is invited to telephone the Applicants' undersigned attorney, Robert P. Renke at (248) 223-9500 if any unresolved matters remain with respect to this Response.

Respectfully submitted,

ARTZ & ARTZ, P.C.



Robert P. Renke, Reg. No. 40,783
28333 Telegraph Road, Suite 250
Southfield, MI 48034
(248) 223-9500

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